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# *Federal Trade Commission Report*

## **"TAR", NICOTINE AND CARBON MONOXIDE OF THE SMOKE OF 207 VARIETIES OF DOMESTIC CIGARETTES**

**FEBRUARY 1984**

PM3001060462

REPORT OF "TAR", NICOTINE AND CARBON MONOXIDE  
OF THE SMOKE OF 207 VARIETIES  
OF DOMESTIC CIGARETTES

February 1984

The Federal Trade Commission's Laboratory has determined the "tar" (dry particulate matter), total alkaloid (reported as nicotine) and carbon monoxide content of 207 varieties of cigarettes. The Laboratory utilized the Cambridge filter method with the following specifications as set forth in the Commission's announcement July 31, 1967 and July 10, 1980:

1. Smoke cigarettes to a 23mm. butt length, or to the length of the filter and overwrap plus 3mm. if in excess of 23mm.
2. Base results on a test of approximately 90 cigarettes per brand, or type.
3. Cigarettes to be tested will be selected on a random basis, as opposed to "weight selection".
4. Determine particulate matter on a "dry" basis employing the gas chromatography method published by C.H. Sloan and B.J. Sublett in Tobacco Science 9, page 70, 1965 as modified by F.J. Schultz' and A.W. Spears' report published in Tobacco, vol. 162, no. 24, page 32, date June 17, 1966, to determine the moisture content.
5. Determine and report the "tar" content after subtracting moisture and alkaloids (as nicotine) from particulate matter.
6. Carbon monoxide is determined by non-dispersal infrared spectrophotometer.

Concerning the 207 varieties tested, 15 were capable of being smoked to 23mm. The butt length of the other 192 varieties tested ranged from 23.8mm. to an average of between 41.5 to 43.0mm. The butt length of 171 of the 207 varieties tested exceeded 30mm.

The samples used were obtained by attempting to purchase two packages of each variety of cigarettes as distributed by domestic cigarette manufacturers during August 1982 through December 1982 in each of 50 geographic locations throughout the country. Not all varieties of cigarettes were available in each of the 50 geographic locations and in these instances, one or more additional packages of cigarettes were purchased in those geographic locations where respective varieties were available. The sample utilized in the tests were representative of the 207 varieties of cigarettes as available throughout the country at the time of purchase.

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. In the table listing the cigarette varieties in alphabetical order the "tar" and carbon monoxide content is reported to the nearest 0.1 milligram and the nicotine to the nearest 0.01 milligram, each with appropriate statistical values. The average weight is reported in grams per cigarette and the butt length range to the nearest 0.1 millimeter. In all other tables the average weight and butt length columns and the figures representing the standard deviation of the mean have been eliminated. The "tar" and carbon monoxide figures have been rounded to the nearest milligram (0.5 milligrams and greater rounded up, 0.4 milligrams and less rounded down) and the nicotine figures have been rounded to the nearest tenth of a milligram (0.05 milligrams and greater rounded up, 0.04 milligrams and less rounded down). Three tables respectively list varieties in increasing order of "tar" values, in increasing order of nicotine values and in increasing order of carbon monoxide values. Accordingly, "tar", nicotine and carbon monoxide figures in the tables represent rounded off averages without indication of their precision.

It should be noted that cigarette brands with assay results for "tar" and carbon monoxide below 0.5 mg. per cigarette and for nicotine below 0.05 mg. per cigarette are recorded in the accompanying tables with asterisks (\*) indicating that they are below 0.5 mg. "tar", 0.05 mg. nicotine and 0.5 mg. carbon monoxide. The tables do not differentiate and no ranking is intended between these cigarettes because the current, approved testing methodology is not sensitive enough to differentiate between cigarettes at these levels.

On April 13, 1983, the Commission announced its determination that its present testing methodology for "tar", nicotine and carbon monoxide does not measure accurately Brown & Williamson's Barclay cigarettes and in fact understates the measured deliveries of these products. Therefore, it announced that until it adopts a new testing methodology that is able to measure Barclay cigarettes, future FTC Tar, Nicotine & Carbon Monoxide Reports will not include test results for Barclay cigarettes. As a result, no test results for Barclay cigarettes are included within this report. At that same time the Commission also found that there was a significant likelihood that the same problem (namely, an inaccurate reporting of the "tar", nicotine and CO delivery) existed with respect to Kool Ultra and Kool Ultra 100's, two other brands of cigarettes manufactured by Brown & Williamson. However, the Commission has not yet reached any conclusion whether Kool Ultra and Kool Ultra 100's are ranked inappropriately. Therefore, two asterisks (\*\*) have been appended to Kool Ultra and Kool Ultra 100's in this report to indicate this continuing controversy.

TAR NICOTINE AND CARBON MONOXIDE CONTENT  
OF TWO HUNDRED SEVEN (207) VARIETIES OF DOMESTIC CIGARETTES

BRAND TESTED	TYPE CODE	LNTH TESTD	AVG. WEIGHT	BUTT LENGTH	TPM DRY	NICOTINE CONTENT	CARBON MONOXIDE
ALPINE	F; SP; M	85MM	0.9707	28.8-29.9MM	14.2+0.3	0.82+0.02	13.5+0.4
BELAIR	F; SP; M	85MM	0.9465	32.0-33.7MM	9.0+0.2	0.73+0.02	9.3+0.4
BELAIR 100	F; SP; M	100MM	1.1213	37.2-40.4MM	9.2+0.3	0.67+0.02	9.6+0.4
BENSON & HEDGES	R; F; HP	70MM	1.0115	32.0-35.2MM	1.3+0.2	0.09+0.01	1.6+0.2
BENSON & HEDGES	F; HP	85MM	1.0100	32.0-35.0MM	15.0+0.3	1.10+0.02	12.7+0.3
BENSON & HEDGES 100	F; HP; M	100MM	1.1064	34.6-35.9MM	16.6+0.3	1.06+0.03	15.4+0.4
BENSON & HEDGES 100	F; HP	100MM	1.1077	34.3-36.2MM	16.9+0.4	1.07+0.02	15.5+0.5
BENSON & HEDGES 100	F; SP	100MM	1.1197	33.8-36.4MM	17.0+0.3	1.11+0.03	16.2+0.5
BENSON & HEDGES 100	F; SP; M	100MM	1.1092	34.5-35.5MM	16.5+0.3	1.07+0.03	16.2+0.4
BENSON & HEDGES LIGHTS 100	F; SP; M	100MM	1.1072	38.5-40.1MM	10.0+0.3	0.71+0.02	10.8+0.3
BENSON & HEDGES LIGHTS 100	F; SP	100MM	1.1129	37.3-40.1MM	10.5+0.2	0.75+0.02	11.8+0.4
BENSON & HEDGES ULTRA LIGHTS	F; HP; M	100MM	1.0221	38.9-40.6MM	6.3+0.2	0.48+0.02	6.5+0.3
BENSON & HEDGES ULTRA LIGHTS	F; HP	100MM	1.0025	38.1-39.8MM	6.2+0.3	0.47+0.02	6.5+0.4
BRIGHT	F; SP; M	85MM	0.8915	35.2-36.0MM	6.2+0.2	0.48+0.02	7.5+0.4
BRIGHT 100	F; SP; M	100MM	1.0854	39.9-40.2MM	7.4+0.6	0.56+0.03	9.7+0.9
BULL DURHAM	F; SP	85MM	1.1645	26.0-28.0MM	27.9+0.4	1.78+0.03	23.1+0.4
CAMBRIDGE	F; HP	85MM	0.8635	38.8-40.3MM	*	*	*
CAMBRIDGE	F; SP	85MM	0.8419	34.0-36.4MM	0.8+0.1	0.08+0.01	1.1+0.1
CAMBRIDGE 100	F; SP	100MM	0.9702	38.3-40.0MM	4.7+0.3	0.43+0.02	5.5+0.3
CAMEL	F; SP	85MM	0.9732	27.4-28.5MM	15.3+0.3	0.98+0.02	14.1+0.3
CAMEL	R; NF; SP	70MM	0.8687	23.0MM	20.3+0.4	1.20+0.03	12.4+0.7
CAMEL LIGHTS	F; HP	80MM	0.9039	29.2-30.5MM	7.9+0.2	0.64+0.02	7.6+0.4
CAMEL LIGHTS	F; SP	85MM	0.9234	32.4-33.5MM	7.9+0.2	0.64+0.02	9.6+0.4
CAMEL LIGHTS 100	F; SP	100MM	1.1219	36.4-38.3MM	12.2+0.3	0.81+0.02	14.5+0.4
CARLTON	F; HP	85MM	0.8058	37.1-41.0MM	*	*	*
CARLTON	F; SP; M	85MM	0.7915	32.3-33.8MM	0.8+0.1	0.08+0.01	0.9+0.1
CARLTON	F; SP	85MM	0.7798	29.8-36.5MM	1.2+0.1	0.11+0.01	1.6+0.2
CARLTON 100	F; HP; M	100MM	0.9106	37.4-39.1MM	0.5+0.1	0.06+0.01	*
CARLTON 100	F; HP	100MM	0.9236	36.6-40.0MM	0.7+0.1	0.07+0.01	*
CARLTON 100	F; SP; M	100MM	0.9246	34.2-36.4MM	4.5+0.2	0.38+0.01	5.4+0.4
CARLTON 100	F; SP	100MM	0.9288	33.6-37.0MM	4.6+0.2	0.39+0.01	5.5+0.4
CARLTON 120	F; SP; M	120MM	0.9862	36.0-40.1MM	5.8+0.3	0.54+0.03	4.0+0.3
CARLTON 120	F; SP	120MM	0.9846	36.5-39.8MM	6.5+0.2	0.58+0.02	4.5+0.3
CHESTERFIELD	F; SP	85MM	0.8889	28.3-29.8MM	15.1+0.3	1.00+0.03	14.9+0.4
CHESTERFIELD	R; NF; SP	70MM	0.8550	23.0MM	20.6+0.5	1.22+0.03	12.2+0.4
CHESTERFIELD	NF; SP	85MM	1.0358	23.0MM	25.3+0.5	1.54+0.03	15.2+0.6
CHESTERFIELD 100	F; SP	100MM	1.0155	37.4-39.7MM	14.6+0.2	0.98+0.02	15.7+0.3
DECADE	F; SP	85MM	0.8603	32.5-34.2MM	5.7+0.2	0.49+0.02	4.7+0.3
DECADE	F; SP; M	85MM	0.8480	32.8-34.1MM	5.7+0.3	0.48+0.03	4.9+0.4
DORAL II	F; SP	85MM	1.0527	36.3-38.0MM	4.6+0.2	0.38+0.02	3.4+0.2
DORAL II	F; SP; M	85MM	1.0433	34.6-39.0MM	4.6+0.2	0.37+0.02	3.4+0.3
ENGLISH OVALS	R; NF; HP	70MM	0.9051	23.0MM	22.3+0.4	1.55+0.04	11.6+0.3
ENGLISH OVALS	NF; HP	85MM	1.1586	23.0MM	28.8+0.5	2.05+0.06	14.6+0.4
EVE LIGHTS 100	F; SP	100MM	0.9682	37.3-39.5MM	13.0+0.2	0.96+0.01	13.4+0.3
EVE LIGHTS 100	F; SP; M	100MM	0.9626	37.5-40.0MM	12.9+0.3	0.97+0.03	13.2+0.4
EVE LIGHTS 120	F; HP; M	120MM	0.9816	36.8-39.2MM	13.9+0.4	1.05+0.03	11.1+0.5

1. F-filter; NF-non-filter; M-menthol; R-regular; HP-hard pack; SP-soft pack; mm-millimeter.
2. Average weight reported in grams per cigarette.
3. Range used in butt length because of variance of overwrap.
4. TPM dry (tar) - milligrams total particulate matter less nicotine and water per cigarette.
5. Total alkaloids reported as nicotine milligrams per cigarette.
6. Carbon Monoxide reported as milligrams per cigarette.
- + Tolerance shown is twice the standard deviation.
- \* Below the sensitivity of the method.
- \*\* See statement in text concerning Kool Ultra brands.

TAR NICOTINE AND CARBON MONOXIDE CONTENT  
OF TWO HUNDRED SEVEN (207) VARIETIES OF DOMESTIC CIGARETTES

BRAND TESTED	TYPE CODE	LN <sup>1</sup> TH TESTD	AVG. WEIGHT	BUTT LENGTH	TPM DRY	NICOTINE CONTENT	CARBON MONOXIDE
EVE LIGHTS 120	F; HP	120MM	0.9784	35.5-40.7MM	13.7+0.4	1.06+0.03	11.3+0.4
GALAXY	F; SP	85MM	1.0704	32.0-34.2MM	14.9+0.3	0.94+0.02	14.7+0.4
GOLDEN LIGHTS	F; SP	85MM	0.8811	32.9-36.2MM	8.8+0.3	0.71+0.02	9.5+0.4
GOLDEN LIGHTS	F; SP; M	85MM	0.8681	34.0-36.5MM	8.7+0.2	0.68+0.02	8.6+0.3
GOLDEN LIGHTS 100	F; SP; M	100MM	1.0305	37.2-39.2MM	8.9+0.4	0.73+0.03	9.1+0.5
GOLDEN LIGHTS 100	F; SP	100MM	1.0495	36.4-39.3MM	9.0+0.3	0.76+0.02	8.9+0.4
HALF & HALF	F; SP	85MM	1.1021	25.8-28.5MM	17.5+0.3	1.23+0.03	16.2+0.4
HERBERT TAREYTON	NF; SP	85MM	1.1497	23.0MM	26.0+0.5	1.68+0.04	16.2+0.5
ICEBERG 100	F; SP; M	100MM	0.9638	33.2-36.8MM	3.4+0.1	0.30+0.01	4.4+0.3
KENT	F; SP	85MM	0.9183	27.5-30.2MM	12.1+0.4	0.87+0.05	10.6+0.3
KENT	F; HP	80MM	0.9113	26.8-30.1MM	12.5+0.3	0.87+0.02	11.7+0.3
KENT 100	F; SP	100MM	1.0555	33.9-36.4MM	13.8+0.3	1.03+0.03	11.6+0.5
KENT 100	F; SP; M	100MM	1.0413	34.4-36.7MM	15.1+0.3	1.15+0.02	13.0+0.3
KENT III	F; SP	85MM	0.8293	34.1-35.5MM	3.0+0.2	0.31+0.02	2.9+0.2
KENT III 100	F; SP	100MM	0.9833	36.4-39.4MM	4.2+0.2	0.43+0.02	5.3+0.3
KOOL	F; HP; M	80MM	0.9067	25.1-26.6MM	15.9+0.3	1.07+0.02	14.7+0.4
KOOL	F; SP; M	85MM	0.9013	28.3-29.3MM	16.7+0.3	1.14+0.03	14.6+0.3
KOOL	R; NF; SP; M	70MM	0.8543	23.0MM	20.4+0.6	1.16+0.04	14.3+0.3
KOOL LIGHTS	F; SP; M	85MM	0.9192	32.4-34.5MM	8.9+0.3	0.67+0.02	9.6+0.3
KOOL LIGHTS 100	F; SP; M	100MM	1.0879	37.7-40.5MM	9.8+0.4	0.76+0.03	9.4+0.4
KOOL MILDS	F; SP; M	85MM	0.8825	32.6-35.4MM	11.4+0.5	0.82+0.02	12.0+0.4
KOOL MILDS 100	F; SP; M	100MM	1.1201	38.3-41.0MM	11.4+0.2	0.84+0.02	12.8+0.3
KOOL SUPER LONGS 100	F; SP; M	100MM	1.0752	33.9-35.6MM	14.7+0.3	0.97+0.02	15.8+0.5
KOOL ULTRA **	F; SP; M	85MM	0.9092	34.1-36.5MM	1.9+0.3	0.17+0.02	1.4+0.3
KOOL ULTRA 100 **	F; SP; M	100MM	1.0831	38.4-41.0MM	4.8+0.3	0.43+0.03	3.7+0.4
L & M	F; SP	85MM	0.8736	32.3-33.7MM	13.7+0.3	0.90+0.02	13.4+0.3
L & M	F; HP	80MM	0.8402	28.8-30.4MM	13.7+0.2	0.92+0.02	12.9+0.3
L & M 100	F; SP	100MM	1.0152	37.6-39.3MM	14.1+0.2	0.98+0.02	14.7+0.4
L & M LIGHTS	F; SP	85MM	0.8561	32.1-34.0MM	9.1+0.2	0.83+0.02	6.8+0.3
L & M LIGHTS 100	F; SP	100MM	0.9552	37.5-38.9MM	7.9+0.2	0.77+0.02	5.3+0.3
L & M LIGHTS 100	F; SP; M	100MM	0.9461	37.6-38.2MM	8.3+0.3	0.80+0.03	5.7+0.4
LARK	F; SP	85MM	0.9911	28.3-34.3MM	14.2+0.3	0.86+0.03	13.2+0.3
LARK 100	F; SP	100MM	1.1316	37.5-39.3MM	15.8+0.3	1.06+0.03	15.3+0.4
LARK LIGHTS	F; SP	85MM	0.9806	31.8-34.0MM	13.0+0.3	0.92+0.02	12.4+0.4
LARK LIGHTS 100	F; SP	100MM	1.1252	37.3-38.4MM	13.6+0.4	1.00+0.02	13.9+0.3
LONG JOHNS 120	F; SP; M	120MM	1.1782	36.7-39.4MM	17.1+0.5	1.35+0.03	18.4+1.1
LONG JOHNS 120	F; SP	120MM	1.1974	37.6-39.3MM	18.1+0.6	1.32+0.04	19.0+0.9
LUCKY 100	F; SP	100MM	0.9460	34.3-36.7MM	3.4+0.2	0.31+0.02	4.0+0.3
LUCKY STRIKE	F; SP	85MM	0.9273	31.0-35.1MM	10.7+0.3	0.81+0.02	11.0+0.4
LUCKY STRIKE	F; HP	80MM	0.9408	31.8-34.6MM	11.1+0.2	0.83+0.02	11.6+0.2
LUCKY STRIKE	R; NF; SP	70MM	0.8910	23.0MM	24.2+0.4	1.43+0.03	16.1+0.4
MARLBORO	F; HP; M	85MM	0.9221	25.0-27.2MM	14.5+0.3	0.85+0.02	13.1+0.5
MARLBORO	F; SP; M	85MM	0.9683	28.0-29.6MM	15.0+0.4	0.87+0.02	14.3+0.5
MARLBORO	F; SP	85MM	0.9866	27.6-29.0MM	17.1+0.4	1.04+0.03	15.6+0.5
MARLBORO	F; HP	80MM	0.9284	23.8-27.4MM	17.1+0.2	1.05+0.02	15.1+0.4
MARLBORO 100	F; SP	100MM	1.1227	33.8-35.8MM	16.9+0.3	1.09+0.03	15.1+0.3

- 1 F-filter; NF-non-filter; M-menthol; R-regular; HP-hard pack; SP-soft pack; mm-millimeter.
  - 2 Average weight reported in grams per cigarette.
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  - 4 TPM dry (tar) - milligrams total particulate matter less nicotine and water per cigarette.
  - 5 Total alkaloids reported as nicotine milligrams per cigarette.
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BRAND TESTED	TYPE CODE	LNTH TESTD	AVG. WEIGHT	BUTT LENGTH	TPM DRY	NICOTINE	CARBON MONOXIDE
MARLBORO 100	F; HP	100MM	1.1162	33.8-35.7MM	16.6+0.3	1.07+0.02	15.4+0.5
MARLBORO LIGHTS	F; HP	85MM	0.9550	33.4-34.7MM	10.2+0.2	0.69+0.02	11.0+0.3
MARLBORO LIGHTS	F; SP	85MM	0.9812	32.7-35.2MM	10.7+0.3	0.74+0.04	11.5+0.4
MARLBORO LIGHTS 100	F; SP	100MM	1.1189	39.0-40.6MM	10.6+0.3	0.75+0.02	11.8+0.3
MAX 120	F; SP	120MM	1.0036	36.8-39.1MM	18.2+0.4	1.35+0.04	16.8+0.6
MAX 120	F; SP; M	120MM	1.0077	37.6-40.2MM	18.6+0.4	1.36+0.03	17.0+0.7
MERIT	F; SP	85MM	0.9830	34.3-35.9MM	8.9+0.3	0.59+0.02	11.2+0.4
MERIT	F; SP; M	85MM	0.9681	34.4-35.7MM	8.9+0.4	0.58+0.02	10.6+0.5
MERIT 100	F; SP; M	100MM	1.1166	38.0-39.9MM	10.3+0.4	0.71+0.02	11.8+0.7
MERIT 100	F; SP	100MM	1.1107	38.1-40.2MM	10.9+0.5	0.74+0.03	12.9+0.6
MERIT ULTRA LIGHTS	F; SP	85MM	0.9247	34.8-36.3MM	4.2+0.2	0.35+0.01	4.5+0.3
MERIT ULTRA LIGHTS	F; SP; M	85MM	0.9243	37.1-40.4MM	3.8+0.2	0.32+0.02	4.0+0.3
MERIT ULTRA LIGHTS 100	F; SP; M	100MM	1.0456	39.1-40.0MM	3.7+0.2	0.31+0.02	4.3+0.3
MERIT ULTRA LIGHTS 100	F; SP	100MM	1.0416	38.0-39.7MM	5.8+0.6	0.45+0.03	7.4+1.0
MONTCLAIR	F; SP; M	85MM	0.9176	25.8-28.4MM	15.5+0.3	1.03+0.03	16.3+0.7
MORE 120	F; SP	120MM	1.0333	41.7-42.6MM	16.6+0.4	1.15+0.03	19.6+0.5
MORE 120	F; SP; M	120MM	1.0345	41.5-43.0MM	15.1+0.5	1.15+0.03	17.6+0.5
MORE LIGHTS 100	F; HP; M	100MM	0.8691	37.1-38.7MM	6.8+0.2	0.55+0.01	8.2+0.4
MORE LIGHTS 100	F; HP	100MM	0.9407	37.0-38.7MM	8.2+0.2	0.64+0.01	8.2+0.3
MULTIFILTER	F; SP	85MM	1.1274	32.6-34.7MM	12.2+0.2	0.77+0.02	10.9+0.4
MULTIFILTER	F; SP; M	85MM	1.1302	32.4-33.7MM	12.5+0.4	0.79+0.03	10.8+0.5
NEWPORT	F; HP; M	80MM	0.8798	27.5-29.6MM	16.1+0.2	1.11+0.02	16.6+0.4
NEWPORT	F; SP; M	85MM	0.9087	27.8-29.3MM	16.7+0.4	1.13+0.02	17.2+0.5
NEWPORT 100	F; SP; M	100MM	1.0611	34.6-37.0MM	19.7+0.3	1.39+0.03	18.9+0.4
NEWPORT LIGHTS	F; SP; M	85MM	0.8739	34.3-36.4MM	9.0+0.3	0.70+0.02	9.4+0.3
NEWPORT LIGHTS	F; HP; M	80MM	0.8439	30.9-35.4MM	8.7+0.2	0.69+0.01	9.2+0.4
NEWPORT LIGHTS 100	F; SP; M	100MM	1.0281	35.4-39.8MM	9.6+0.2	0.78+0.02	9.8+0.4
NEWPORT RED	F; SP	85MM	0.9234	32.1-33.5MM	13.2+0.3	0.97+0.03	15.3+0.5
NEWPORT RED	F; HP	80MM	0.8737	31.6-33.8MM	13.0+0.6	0.96+0.04	14.7+0.5
NORTHWIND	F; SP; M	85MM	0.9554	34.6-35.4MM	10.3+0.2	0.69+0.02	11.2+0.4
NORTHWIND 100	F; SP; M	100MM	1.1084	38.7-39.9MM	10.7+0.3	0.74+0.02	11.4+0.6
NOW	F; HP	80MM	0.6887	33.7-36.1MM	*	*	*
NOW	F; SP	85MM	0.7752	37.2-38.2MM	1.1+0.1	0.11+0.01	1.4+0.1
NOW	F; SP; M	85MM	0.7932	36.8-38.2MM	0.9+0.1	0.11+0.01	1.2+0.1
NOW 100	F; HP	100MM	0.6807	37.0-39.6MM	*	*	*
NOW 100	F; SP; M	100MM	0.9163	37.0-38.7MM	1.6+0.1	0.18+0.01	1.0+0.1
NOW 100	F; SP	100MM	0.9205	37.1-39.0MM	2.3+0.2	0.22+0.01	1.7+0.2
OLD GOLD FILTER	F; SP	85MM	0.9162	27.5-30.9MM	17.5+0.3	1.22+0.03	18.2+0.5
OLD GOLD FILTER 100	F; SP	100MM	1.0523	32.9-37.7MM	20.0+0.4	1.42+0.03	19.2+0.6
OLD GOLD LIGHTS	F; SP	85MM	0.8901	34.5-36.0MM	9.8+0.2	0.81+0.02	10.6+0.3
OLD GOLD STRAIGHT	NF; SP	85MM	1.0034	23.0MM	26.3+0.4	1.57+0.03	17.7+0.4
OMNI 100	F; SP; M	100MM	1.0105	37.9-39.7MM	7.2+0.2	0.61+0.03	5.9+0.5
PALL MALL	F; SP	85MM	0.9784	25.5-28.7MM	17.2+0.3	1.14+0.03	16.9+0.5
PALL MALL	NF; SP	85MM	1.0512	23.0MM	23.8+0.4	1.41+0.03	15.7+0.4
PALL MALL 100	F; SP	100MM	1.1166	33.5-37.2MM	15.9+0.4	1.15+0.03	15.5+0.5
PALL MALL EXTRA LIGHT	F; SP	85MM	0.9871	32.2-34.8MM	6.9+0.2	0.60+0.02	6.3+0.3

- 1 F-filter; NF-non-filter; M-menthol; R-regular; HP-hard pack; SP-soft pack; mm-millimeter.
- 2 Average weight reported in grams per cigarette.
- 3 Range used in butt length because of variance of overwrap.
- 4 TPM dry (tar) - milligrams total particulate matter less nicotine and water per cigarette.
- 5 Total alkaloids reported as nicotine milligrams per cigarette.
- 6 Carbon Monoxide reported as milligrams per cigarette.
- + Tolerance shown is twice the standard deviation.
- \* Below the sensitivity of the method.
- \*\* See statement in text concerning King filter brands.

PM3001060467

TAR NICOTINE AND CARBON MONOXIDE CONTENT  
OF TWO HUNDRED SEVEN (207) VARIETIES OF DOMESTIC CIGARETTES

BRAND TESTED	TYPE CODE	LNTH TESTD	AVG. WEIGHT	BUTT LENGTH	TPM DRY	NICOTINE CONTENT	CARBON MONOXIDE
PALL MALL LIGHT 100	F; SP	100MM	1.0851	36.5-39.3MM	8.9+0.2	0.76+0.02	7.1+0.4
PALL MALL LIGHT 100	F; SP; M	100MM	1.0135	33.5-37.2MM	12.9+0.6	1.02+0.02	11.9+0.5
PARLIAMENT LIGHTS	F; HP	85MM	0.9534	32.4-33.7MM	8.8+0.2	0.61+0.02	8.8+0.2
PARLIAMENT LIGHTS	F; SP	85MM	0.9995	32.7-34.7MM	9.7+0.3	0.68+0.02	9.3+0.2
PARLIAMENT LIGHTS 100	F; SP	100MM	1.2413	38.5-40.7MM	11.4+0.3	0.85+0.02	9.8+0.4
PHILIP MORRIS	R; NF; SP	70MM	0.8590	23.0MM	22.5+0.4	1.32+0.03	13.1+0.4
PHILIP MORRIS COMMANDER	NF; SP	85MM	1.0484	23.0MM	27.0+0.5	1.64+0.03	15.1+0.5
PICAYUNE	NF; SP	70MM	0.8658	23.0MM	18.0+0.5	1.02+0.04	14.0+0.4
PLAYERS	R; NF; HP	70MM	1.0484	23.0MM	26.8+0.9	1.87+0.06	15.4+0.6
RALEIGH	F; SP	85MM	0.9630	27.6-30.0MM	15.2+0.3	0.95+0.03	16.5+0.4
RALEIGH	NF; SP	85MM	1.0501	23.0MM	24.1+0.7	1.35+0.05	16.7+0.8
RALEIGH 100	F; SP	100MM	1.1419	34.2-35.9MM	16.1+0.5	1.06+0.03	16.5+0.6
RALEIGH LIGHTS	F; SP	85MM	0.9650	30.5-36.0MM	9.0+0.3	0.69+0.02	9.3+0.4
RALEIGH LIGHTS 100	F; SP	100MM	1.1582	35.7-42.2MM	10.0+0.3	0.78+0.03	12.0+0.5
REBEL	F; SP	85MM	0.9269	34.6-36.0MM	10.7+0.2	0.87+0.02	12.5+0.4
REBEL 100	F; SP	100MM	1.0376	34.7-35.9MM	11.8+0.3	0.96+0.02	12.9+0.6
SALEM	F; SP; M	85MM	0.9597	26.6-27.1MM	15.7+0.3	1.05+0.03	14.4+0.5
SALEM 100	F; SP; M	100MM	1.1502	33.7-35.9MM	14.6+0.2	1.04+0.02	13.3+0.6
SALEM LIGHTS	F; SP; M	85MM	0.9505	32.7-36.6MM	8.2+0.2	0.60+0.01	9.1+0.3
SALEM LIGHTS 100	F; SP; M	100MM	1.1306	35.9-39.8MM	9.3+0.3	0.70+0.02	10.9+0.5
SALEM SLIM LIGHTS 100	F; HP; M	100MM	0.7949	37.3-38.7MM	7.3+0.2	0.59+0.01	8.3+0.3
SALEM ULTRA	F; SP; M	85MM	0.9159	32.5-34.4MM	4.4+0.3	0.37+0.02	4.3+0.4
SALEM ULTRA 100	F; SP; M	100MM	1.0913	36.5-39.9MM	4.6+0.2	0.40+0.02	5.3+0.4
SARATOGA 120	F; HP	120MM	1.1130	37.2-39.5MM	14.3+0.4	0.95+0.02	14.0+0.4
SARATOGA 120	F; HP; M	120MM	1.1078	37.3-39.4MM	14.2+0.4	0.98+0.04	13.6+0.6
SATIN 100	F; SP	100MM	1.0470	34.8-36.5MM	9.7+0.3	0.80+0.02	10.0+0.4
SATIN 100	F; SP; M	100MM	1.0594	34.1-36.5MM	9.9+0.3	0.80+0.02	11.2+0.5
SILVA THINS 100	F; SP	100MM	0.9346	34.1-36.6MM	11.6+0.3	0.96+0.03	8.6+0.3
SILVA THINS 100	F; SP; M	100MM	0.9449	34.3-36.7MM	11.6+0.4	0.99+0.04	9.2+0.4
SPRING 100	F; SP; M	100MM	1.0611	33.5-35.7MM	19.2+0.3	1.01+0.03	16.4+0.6
ST. MORITZ 100	F; SP	100MM	1.0499	35.7-38.0MM	15.0+0.4	1.11+0.03	14.4+0.4
ST. MORITZ 100	F; SP; M	100MM	1.0517	34.9-38.5MM	14.6+0.3	1.09+0.02	14.2+0.5
TALL 120	F; SP; M	120MM	1.1939	36.5-40.3MM	16.7+0.3	1.31+0.04	16.1+0.5
TALL 120	F; SP	120MM	1.2033	36.9-39.2MM	18.9+0.5	1.45+0.05	19.2+0.6
TAREYTON	F; SP	85MM	1.0190	25.0-29.5MM	14.4+0.3	0.97+0.03	14.7+0.4
TAREYTON 100	F; SP	100MM	1.1568	33.8-36.7MM	13.8+0.2	0.98+0.02	15.4+0.5
TAREYTON LIGHTS	F; SP	85MM	0.8704	33.8-36.4MM	4.6+0.2	0.37+0.02	4.4+0.3
TAREYTON LONG LIGHTS 100	F; SP	100MM	1.1542	33.8-36.3MM	7.4+0.3	0.61+0.02	6.5+0.6
TRIUMPH	F; SP; M	85MM	0.8312	34.3-36.1MM	3.0+0.2	0.32+0.02	2.6+0.2
TRIUMPH	F; SP	85MM	0.8255	34.3-35.8MM	3.3+0.1	0.37+0.02	3.2+0.3
TRIUMPH 100	F; SP	100MM	0.9829	36.8-39.7MM	4.2+0.2	0.43+0.02	4.8+0.4
TRIUMPH 100	F; SP; M	100MM	0.9839	37.2-38.6MM	4.2+0.1	0.45+0.02	5.0+0.3
TRUE	F; SP	85MM	0.8277	32.2-34.2MM	5.3+0.3	0.43+0.02	5.1+0.4
TRUE	F; SP; M	85MM	0.8272	32.3-33.6MM	5.1+0.2	0.42+0.01	5.2+0.2
TRUE 100	F; SP	100MM	0.9861	34.2-36.3MM	7.7+0.3	0.59+0.02	8.4+0.3
TRUE 100	F; SP; M	100MM	0.9837	34.4-36.2MM	7.9+0.3	0.60+0.02	8.8+0.4

- 1 F-filter; NF-non-filter; M-menthol; R-regular; HP-hard pack; SP-soft pack; mm-millimeter.
- 2 Average weight reported in grams per cigarette.
- 3 Range used in butt length because of variance of overwrap.
- 4 TPM dry (tar) - milligrams total particulate matter less nicotine and water per cigarette.
- 5 Total alkaloids reported as nicotine milligrams per cigarette.
- 6 Carbon Monoxide reported as milligrams per cigarette.
- + Tolerance shown is twice the standard deviation.
- \* Below the sensitivity of the method.
- \*\* See statement in text concerning Kool Ultra brands

TAR NICOTINE AND CARBON MONOXIDE CONTENT  
OF TWO HUNDRED SEVEN (207) VARIETIES OF DOMESTIC CIGARETTES

BRAND TESTED	TYPE CODE	LNTH TESTD	AVG. WEIGHT	BUTT LENGTH	TPM DRY	NICOTINE CONTENT	CARBON MONOXIDE
VANTAGE	F; SP	85MM	1.0426	32.4-33.6MM	9.2+0.5	0.67+0.02	11.8+0.4
VANTAGE	F; SP; M	85MM	1.0848	32.3-34.4MM	9.9+0.3	0.68+0.01	13.1+0.4
VANTAGE 100	F; SP	100MM	1.2372	33.8-35.5MM	9.1+0.3	0.65+0.03	12.0+0.4
VANTAGE ULTRA LIGHTS	F; SP	85MM	0.8915	32.2-34.7MM	5.1+0.2	0.41+0.02	6.3+0.4
VANTAGE ULTRA LIGHTS	F; SP; M	85MM	0.8987	32.7-33.8MM	4.6+0.2	0.38+0.01	6.2+0.3
VANTAGE ULTRA LIGHTS 100	F; SP	100MM	1.0552	36.7-37.9MM	4.9+0.1	0.42+0.02	6.3+0.4
VANTAGE ULTRA LIGHTS 100	F; SP; M	100MM	1.0302	32.9-33.8MM	4.7+0.2	0.40+0.02	6.7+0.3
VICEROY	F; SP	85MM	0.9475	27.6-30.0MM	15.0+0.3	0.93+0.02	16.8+0.4
VICEROY RICH LIGHTS	F; SP	85MM	0.9759	31.1-34.3MM	9.4+0.3	0.72+0.02	9.9+0.4
VICEROY RICH LIGHTS 100	F; SP	100MM	1.1708	37.9-40.0MM	10.0+0.2	0.78+0.02	11.7+0.4
VICEROY SUPER LONG 100	F; SP	100MM	1.1013	33.4-36.6MM	14.4+0.2	0.95+0.02	16.4+0.5
VIRGINIA SLIMS 100	F; SP	100MM	0.9403	34.4-36.1MM	15.1+0.3	0.96+0.02	13.7+0.5
VIRGINIA SLIMS 100	F; SP; M	100MM	0.9481	33.7-36.0MM	15.4+0.3	0.95+0.07	13.7+0.4
VIRGINIA SLIMS LIGHTS 100	F; HP; M	100MM	0.9694	38.6-40.3MM	7.9+0.3	0.59+0.02	7.3+0.5
VIRGINIA SLIMS LIGHTS 100	F; HP	100MM	0.9635	38.6-40.2MM	8.4+0.4	0.62+0.02	8.4+0.5
WINSTON	F; SP	85MM	0.9568	27.2-28.7MM	14.9+0.3	0.96+0.02	15.6+0.5
WINSTON	F; HP	80MM	0.9507	25.1-27.3MM	16.0+0.2	0.99+0.02	14.8+0.5
WINSTON 100	F; SP	100MM	1.1331	33.4-35.6MM	16.0+0.4	1.08+0.03	15.5+0.6
WINSTON INTERNATIONAL 100	F; HP	100MM	1.0683	31.7-35.1MM	15.9+0.4	1.03+0.03	14.1+0.5
WINSTON LIGHTS	F; SP	85MM	0.9589	32.2-34.3MM	9.1+0.4	0.65+0.03	9.9+0.3
WINSTON LIGHTS 100	F; SP	100MM	1.1193	36.2-38.1MM	11.8+0.2	0.78+0.02	14.4+0.4
WINSTON ULTRA	F; SP	85MM	0.8769	31.8-35.6MM	5.0+0.2	0.39+0.02	6.1+0.4
WINSTON ULTRA 100	F; SP	100MM	1.0716	36.6-38.9MM	4.8+0.1	0.41+0.01	6.1+0.4

- 1 F-filter; NF-non-filter; M-menthol; R-regular; HP-hard pack; SP-soft pack; mm-millimeter.  
 2 Average weight reported in grams per cigarette.  
 3 Range used in butt length because of variance of overwrap.  
 4 TPM dry (tar) - milligrams total particulate matter less nicotine and water per cigarette.  
 5 Total alkaloids reported as nicotine milligrams per cigarette.  
 6 Carbon Monoxide reported as milligrams per cigarette.  
 + Tolerance shown is twice the standard deviation.  
 \* Below the sensitivity of the method.  
 \*\* See statement in text concerning Kool Ultra brands.



TAR NICOTINE AND CO CONTENT OF TWO HUNDRED SEVEN  
BRANDS OF DOMESTIC CIGARETTES TESTED BY FTC METHOD  
(Increasing Order of Tar)

BRAND NAME	TYPE	TAR 1	NICOTINE 2	CARBON MONOXIDE 3
CAMBRIDGE	KING SIZE; FILTER; (HARD PACK)	*	*	*
CARLTON	KING SIZE; FILTER; (HARD PACK)	*	*	*
NOW	KING SIZE; FILTER; (HARD PACK)	*	*	*
NOW 100	100MM; FILTER; (HARD PACK)	*	*	*
CARLTON 100	100MM; FILTER; MENTHOL; (HARD PACK)	1	0.1	*
CARLTON 100	100MM; FILTER; (HARD PACK)	1	0.1	*
CAMBRIDGE	KING SIZE; FILTER	1	0.1	1
CARLTON	KING SIZE; FILTER; MENTHOL	1	0.1	1
NOW	KING SIZE; FILTER	1	0.1	1
NOW	KING SIZE; FILTER; MENTHOL	1	0.1	1
BENSON & HEDGES	REG SIZE; FILTER; (HARD PACK)	1	0.1	2
CARLTON	KING SIZE; FILTER	1	0.1	2
KOOL ULTRA **	KING SIZE; FILTER; MENTHOL	2	0.2	1
NOW 100	100MM; FILTER; MENTHOL	2	0.2	1
NOW 100	100MM; FILTER	2	0.2	2
KENT III	KING SIZE; FILTER	3	0.3	3
TRIUMPH	KING SIZE; FILTER; MENTHOL	3	0.3	3
TRIUMPH	KING SIZE; FILTER	3	0.4	3
ICEBERG 100	100MM; FILTER; MENTHOL	3	0.3	4
LUCKY 100	100MM; FILTER	3	0.3	4
MERIT ULTRA LIGHTS	KING SIZE; FILTER	4	0.3	4
MERIT ULTRA LIGHTS	KING SIZE; FILTER; MENTHOL	4	0.3	4
MERIT ULTRA LIGHTS 100	100MM; FILTER; MENTHOL	4	0.3	4
SALEM ULTRA	KING SIZE; FILTER; MENTHOL	4	0.4	4
KENT III 100	100MM; FILTER	4	0.4	5
TRIUMPH 100	100MM; FILTER	4	0.4	5
TRIUMPH 100	100MM; FILTER; MENTHOL	4	0.5	5
DORAL II	KING SIZE; FILTER	5	0.4	3
DORAL II	KING SIZE; FILTER; MENTHOL	5	0.4	3
KOOL ULTRA 100 **	100MM; FILTER; MENTHOL	5	0.4	4
TAREYTON LIGHTS	KING SIZE; FILTER	5	0.4	4
CAMBRIDGE 100	100MM; FILTER	5	0.4	5
CARLTON 100	100MM; FILTER; MENTHOL	5	0.4	5
CARLTON 100	100MM; FILTER	5	0.4	5
SALEM ULTRA 100	100MM; FILTER; MENTHOL	5	0.4	5
TRUE	KING SIZE; FILTER	5	0.4	5
TRUE	KING SIZE; FILTER; MENTHOL	5	0.4	5
VANTAGE ULTRA LIGHTS	KING SIZE; FILTER	5	0.4	6
VANTAGE ULTRA LIGHTS	KING SIZE; FILTER; MENTHOL	5	0.4	6
VANTAGE ULTRA LIGHTS 100	100MM; FILTER	5	0.4	6
WINSTON ULTRA	KING SIZE; FILTER	5	0.4	6
WINSTON ULTRA 100	100MM; FILTER	5	0.4	6
VANTAGE ULTRA LIGHTS 100	100MM; FILTER; MENTHOL	5	0.4	7

1 "Tar" - milligrams total particulate matter less nicotine and water per cigarette.

2 Nicotine total alkaloids reported in milligrams per cigarette.

3 Carbon Monoxide reported in milligrams per cigarette.

\* Indicates "tar" below 0.5 mg.; nicotine below 0.05 mg. or carbon monoxide below 0.5 mg. per cigarette.

\*\* See statement in text concerning Kool Ultra brands.

TAR NICOTINE AND CO CONTENT OF TWO HUNDRED SEVEN  
BRANDS OF DOMESTIC CIGARETTES TESTED BY FTC METHOD  
(Increasing Order of Tar)

BRAND NAME	TYPE	TAR 1	NICOTINE 2	CARBON MONOXIDE 3
CARLTON 120	120MM; FILTER; MENTHOL	6	0.5	4
CARLTON 120	120MM; FILTER	6	0.6	5
DECADE	KING SIZE; FILTER	6	0.5	5
DECADE	KING SIZE; FILTER; MENTHOL	6	0.5	5
BENSON & HEDGES ULTRA LIGHT	100MM; FILTER; MENTHOL; (HARD PACK)	6	0.5	6
BENSON & HEDGES ULTRA LIGHT	100MM; FILTER; (HARD PACK)	6	0.5	6
MERIT ULTRA LIGHTS 100	100MM; FILTER	6	0.5	7
BRIGHT	KING SIZE; FILTER; MENTHOL	6	0.5	8
OMNI 100	100MM; FILTER; MENTHOL	7	0.6	6
PALL MALL EXTRA LIGHT	KING SIZE; FILTER	7	0.6	6
TAREYTON LONG LIGHTS 100	100MM; FILTER	7	0.6	7
MORE LIGHTS 100	100MM; FILTER; MENTHOL; (HARD PACK)	7	0.6	8
SALEM SLIM LIGHTS 100	100MM; FILTER; MENTHOL; (HARD PACK)	7	0.6	8
BRIGHT 100	100MM; FILTER; MENTHOL	7	0.6	10
L & M LIGHTS 100	100MM; FILTER	8	0.8	5
L & M LIGHTS 100	100MM; FILTER; MENTHOL	8	0.8	6
VIRGINIA SLIMS LIGHTS 100	100MM; FILTER; MENTHOL; (HARD PACK)	8	0.6	7
CAMEL LIGHTS	KING SIZE; FILTER; (HARD PACK)	8	0.6	8
MORE LIGHTS 100	100MM; FILTER; (HARD PACK)	8	0.6	8
TRUE 100	100MM; FILTER	8	0.6	8
VIRGINIA SLIMS LIGHTS 100	100MM; FILTER; (HARD PACK)	8	0.6	8
SALEM LIGHTS	KING SIZE; FILTER; MENTHOL	8	0.6	9
TRUE 100	100MM; FILTER; MENTHOL	8	0.6	9
CAMEL LIGHTS	KING SIZE; FILTER	8	0.6	10
L & M LIGHTS	KING SIZE; FILTER	9	0.8	7
PALL MALL LIGHT 100	100MM; FILTER	9	0.8	7
BELAIR	KING SIZE; FILTER; MENTHOL	9	0.7	9
GOLDEN LIGHTS	KING SIZE; FILTER	9	0.7	9
GOLDEN LIGHTS	KING SIZE; FILTER; MENTHOL	9	0.7	9
GOLDEN LIGHTS 100	100MM; FILTER; MENTHOL	9	0.7	9
GOLDEN LIGHTS 100	100MM; FILTER	9	0.8	9
NEWPORT LIGHTS	KING SIZE; FILTER; MENTHOL	9	0.7	9
NEWPORT LIGHTS	KING SIZE; FIL; MENTHOL; (HARD PACK)	9	0.7	9
PARLIAMENT LIGHTS	KING SIZE; FILTER; (HARD PACK)	9	0.6	9
RALEIGH LIGHTS	KING SIZE; FILTER	9	0.7	9
BELAIR 100	100MM; FILTER; MENTHOL	9	0.7	10
KOOL LIGHTS	KING SIZE; FILTER; MENTHOL	9	0.7	10
VICEROY RICH LIGHTS	KING SIZE; FILTER	9	0.7	10
WINSTON LIGHTS	KING SIZE; FILTER	9	0.6	10
MERIT	KING SIZE; FILTER	9	0.6	11
MERIT	KING SIZE; FILTER; MENTHOL	9	0.6	11
SALEM LIGHTS 100	100MM; FILTER; MENTHOL	9	0.7	11
VANTAGE	KING SIZE; FILTER	9	0.7	12

1 "Tar" - milligrams total particulate matter less nicotine and water per cigarette.

2 Nicotine total alkaloids reported in milligrams per cigarette.

3 Carbon Monoxide reported in milligrams per cigarette.

\* Indicates "tar" below 0.5 mg.; nicotine below 0.05 mg. or carbon monoxide below 0.5 mg. per cigarette.

\*\* See statement in text concerning Koal Ultra brands.

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TAR NICOTINE AND CO CONTENT OF TWO HUNDRED SEVEN  
BRANDS OF DOMESTIC CIGARETTES TESTED BY FTC METHOD  
(Increasing Order of Tar)

BRAND NAME	TYPE	TAR 1	NICOTINE 2	CARBON MONOXIDE 3
VANTAGE 100	100MM; FILTER	9	0.7	12
KOOL LIGHTS 100	100MM; FILTER; MENTHOL	10	0.8	9
PARLIAMENT LIGHTS	KING SIZE; FILTER	10	0.7	9
NEWPORT LIGHTS 100	100MM; FILTER; MENTHOL	10	0.8	10
SATIN 100	100MM; FILTER	10	0.8	10
BENSON & HEDGES LIGHTS 100	100MM; FILTER; MENTHOL	10	0.7	11
MARLBORO LIGHTS	KING SIZE; FILTER; (HARD PACK)	10	0.7	11
NORTHWIND	KING SIZE; FILTER; MENTHOL	10	0.7	11
OLD GOLD LIGHTS	KING SIZE; FILTER	10	0.8	11
SATIN 100	100MM; FILTER; MENTHOL	10	0.8	11
BENSON & HEDGES LIGHTS 100	100MM; FILTER	10	0.7	12
MERIT 100	100MM; FILTER; MENTHOL	10	0.7	12
RALEIGH LIGHTS 100	100MM; FILTER	10	0.8	12
VICEROY RICH LIGHTS 100	100MM; FILTER	10	0.8	12
VANTAGE	KING SIZE; FILTER; MENTHOL	10	0.7	13
PARLIAMENT LIGHTS 100	100MM; FILTER	11	0.9	10
LUCKY STRIKE	KING SIZE; FILTER	11	0.8	11
MARLBORO LIGHTS	KING SIZE; FILTER	11	0.7	11
NORTHWIND 100	100MM; FILTER; MENTHOL	11	0.7	11
KOOL MILDS	KING SIZE; FILTER; MENTHOL	11	0.8	12
LUCKY STRIKE	KING SIZE; FILTER; (HARD PACK)	11	0.8	12
MARLBORO LIGHTS 100	100MM; FILTER	11	0.7	12
REBEL	KING SIZE; FILTER	11	0.9	12
KOOL MILDS 100	100MM; FILTER; MENTHOL	11	0.8	13
MERIT 100	100MM; FILTER	11	0.7	13
SILVA THINS 100	100MM; FILTER	12	1.0	9
SILVA THINS 100	100MM; FILTER; MENTHOL	12	1.0	9
KENT	KING SIZE; FILTER	12	0.9	11
MULTIFILTER	KING SIZE; FILTER	12	0.8	11
KENT	KING SIZE; FILTER; (HARD PACK)	12	0.9	12
REBEL 100	100MM; FILTER	12	1.0	13
CAMEL LIGHTS 100	100MM; FILTER	12	0.8	14
WINSTON LIGHTS 100	100MM; FILTER	12	0.8	14
MULTIFILTER	KING SIZE; FILTER; MENTHOL	13	0.8	11
LARK LIGHTS	KING SIZE; FILTER	13	0.9	12
PALL MALL LIGHT 100	100MM; FILTER; MENTHOL	13	1.0	12
EVE LIGHTS 100	100MM; FILTER	13	1.0	13
EVE LIGHTS 100	100MM; FILTER; MENTHOL	13	1.0	13
NEWPORT RED	KING SIZE; FILTER	13	1.0	15
NEWPORT RED	KING SIZE; FILTER; (HARD PACK)	13	1.0	15
EVE LIGHTS 120	120MM; FILTER; MENTHOL; (HARD PACK)	14	1.0	11
EVE LIGHTS 120	120MM; FILTER; (HARD PACK)	14	1.1	11
KENT 100	100MM; FILTER	14	1.0	12

1 "Tar" - milligrams total particulate matter less nicotine and water per cigarette.

2 Nicotine total alkaloids reported in milligrams per cigarette.

3 Carbon Monoxide reported in milligrams per cigarette.

\* Indicates "tar" below 0.5 mg.; nicotine below 0.05 mg. or carbon monoxide below 0.5 mg. per cigarette.

\*\* See statement in text concerning Kool Ultra brands.

TAR NICOTINE AND CO CONTENT OF TWO HUNDRED SEVEN  
BRANDS OF DOMESTIC CIGARETTES TESTED BY FTC METHOD  
*Increasing Order of Tar*

BRAND NAME	TYPE	TAR 1	NICOTINE 2	CARBON MONOXIDE 3
L & M	KING SIZE; FILTER	14	0.9	13
L & M	KING SIZE; FILTER; (HARD PACK)	14	0.9	13
LARK	KING SIZE; FILTER	14	1.0	13
ALPINE	KING SIZE; FILTER; MENTHOL	14	0.8	14
LARK LIGHTS 100	100MM; FILTER	14	1.0	14
SARATOGA 120	120MM; FILTER; (HARD PACK)	14	0.9	14
SARATOGA 120	120MM; FILTER; MENTHOL; (HARD PACK)	14	1.0	14
L & M 100	100MM; FILTER	14	1.0	15
TAREYTON	KING SIZE; FILTER	14	1.0	15
TAREYTON 100	100MM; FILTER	14	1.0	15
VICEROY SUPER LONG 100	100MM; FILTER	14	1.0	16
BENSON & HEDGES	KING SIZE; FILTER; (HARD PACK)	15	1.1	13
KENT 100	100MM; FILTER; MENTHOL	15	1.2	13
MARLBORO	KING SIZE; FIL; MENTHOL; (HARD PACK)	15	0.9	13
SALEM 100	100MM; FILTER; MENTHOL	15	1.0	13
CAMEL	KING SIZE; FILTER	15	1.0	14
MARLBORO	KING SIZE; FILTER; MENTHOL	15	0.9	14
ST. MORITZ 100	100MM; FILTER	15	1.1	14
ST. MORITZ 100	100MM; FILTER; MENTHOL	15	1.1	14
VIRGINIA SLIMS 100	100MM; FILTER	15	1.0	14
VIRGINIA SLIMS 100	100MM; FILTER; MENTHOL	15	1.0	14
CHESTERFIELD	KING SIZE; FILTER	15	1.0	15
GALAXY	KING SIZE; FILTER	15	0.9	15
CHESTERFIELD 100	100MM; FILTER	15	1.0	16
KOOL SUPER LONGS 100	100MM; FILTER; MENTHOL	15	1.0	16
RALEIGH	KING SIZE; FILTER	15	1.0	16
WINSTON	KING SIZE; FILTER	15	1.0	16
VICEROY	KING SIZE; FILTER	15	0.9	17
MORE 120	120MM; FILTER; MENTHOL	15	1.2	18
SALEM	KING SIZE; FILTER; MENTHOL	16	1.0	14
WINSTON INTERNATIONAL 100	100MM; FILTER; (HARD PACK)	16	1.0	14
KOOL	KING SIZE; FIL; MENTHOL; (HARD PACK)	16	1.1	15
LARK 100	100MM; FILTER	16	1.1	15
PALL MALL 100	100MM; FILTER	16	1.2	15
WINSTON	KING SIZE; FILTER; (HARD PACK)	16	1.0	15
MONTCLAIR	KING SIZE; FILTER; MENTHOL	16	1.0	16
RALEIGH 100	100MM; FILTER	16	1.1	16
WINSTON 100	100MM; FILTER	16	1.1	16
NEWPORT	KING SIZE; FIL; MENTHOL; (HARD PACK)	16	1.1	17
BENSON & HEDGES 100	100MM; FILTER; MENTHOL; (HARD PACK)	17	1.1	15
BENSON & HEDGES 100	100MM; FILTER; (HARD PACK)	17	1.1	15
KOOL	KING SIZE; FILTER; MENTHOL	17	1.1	15
MARLBORO	KING SIZE; FILTER (HARD PACK)	17	1.1	15

1 "Tar" - milligrams total particulate matter less nicotine and water per cigarette.

2 Nicotine total alkaloids reported in milligrams per cigarette.

3 Carbon Monoxide reported in milligrams per cigarette.

\* Indicates "tar" below 0.5 mg.; nicotine below 0.05 mg. or carbon monoxide below 0.5 mg. per cigarette.

\*\* See statement in text concerning Koal Ultra brands.

PM3001060473

TAR NICOTINE AND CO CONTENT OF TWO HUNDRED SEVEN  
BRANDS OF DOMESTIC CIGARETTES TESTED BY FTC METHOD  
(Increasing Order of Tar)

BRAND NAME	TYPE	TAR 1	NICOTINE 2	CARBON MONOXIDE 3
MARLBORO 100	100MM; FILTER	17	1.1	15
MARLBORO 100	100MM; FILTER; (HARD PACK)	17	1.1	15
BENSON & HEDGES 100	100MM; FILTER	17	1.1	16
BENSON & HEDGES 100	100MM; FILTER; MENTHOL	17	1.1	16
HALF & HALF	KING SIZE; FILTER	17	1.2	16
MARLBORO	KING SIZE; FILTER	17	1.0	16
TALL 120	120MM; FILTER; MENTHOL	17	1.3	16
NEWPORT	KING SIZE; FILTER; MENTHOL	17	1.1	17
PALL MALL	KING SIZE; FILTER	17	1.1	17
LONG JOHNS 120	120MM; FILTER; MENTHOL	17	1.3	18
MORE 120	120MM; FILTER	17	1.1	20
PICAYUNE	REG SIZE; NON-FILTER	18	1.0	14
MAX 120	120MM; FILTER	18	1.4	17
MAX 120	120MM; FILTER; MENTHOL	18	1.4	17
OLD GOLD FILTER	KING SIZE; FILTER	18	1.2	18
LONG JOHNS 120	120MM; FILTER	18	1.3	19
SPRING 100	100MM; FILTER; MENTHOL	19	1.0	16
TALL 120	120MM; FILTER	19	1.5	19
CAMEL	REG SIZE; NON-FILTER	20	1.2	12
KOOL	REG SIZE; NON-FILTER; MENTHOL	20	1.2	14
NEWPORT 100	100MM; FILTER; MENTHOL	20	1.4	19
OLD GOLD FILTER 100	100MM; FILTER	20	1.4	19
CHESTERFIELD	REG SIZE; NON-FILTER	21	1.2	12
ENGLISH OVALS	REG SIZE; NON-FILTER; (HARD PACK)	22	1.5	12
PHILIP MORRIS	REG SIZE; NON-FILTER	22	1.3	13
LUCKY STRIKE	REG SIZE; NON-FILTER	24	1.4	16
PALL MALL	KING SIZE; NON-FILTER	24	1.4	16
RALEIGH	KING SIZE; NON-FILTER	24	1.4	17
CHESTERFIELD	KING SIZE; NON-FILTER	25	1.5	15
HERBERT TAREYTON	KING SIZE; NON-FILTER	26	1.7	16
OLD GOLD STRAIGHT	KING SIZE; NON-FILTER	26	1.6	18
PHILIP MORRIS COMMANDER	KING SIZE; NON-FILTER	27	1.6	15
PLAYERS	REG SIZE; NON-FILTER; (HARD PACK)	27	1.9	15
BULL DURHAM	KING SIZE; FILTER	28	1.8	23
ENGLISH OVALS	KING SIZE; NON-FILTER; (HARD PACK)	29	2.1	15

1 "Tar" - milligrams total particulate matter less nicotine and water per cigarette.

2 Nicotine total alkaloids reported in milligrams per cigarette.

3 Carbon Monoxide reported in milligrams per cigarette.

\* Indicates "tar" below 0.5 mg.; nicotine below 0.05 mg. or carbon monoxide below 0.5 mg. per cigarette.

\*\* See statement in text concerning Koal Ultra brands.

TAR NICOTINE AND CO CONTENT OF TWO HUNDRED SEVEN  
BRANDS OF DOMESTIC CIGARETTES TESTED BY FTC METHOD  
(Increasing Order of Nicotine)

BRAND NAME	TYPE	TAR 1	NICOTINE 2	CARBON MONOXIDE 3
CAMBRIDGE	KING SIZE; FILTER; (HARD PACK)	*	*	*
CARLTON	KING SIZE; FILTER; (HARD PACK)	*	*	*
NOW	KING SIZE; FILTER; (HARD PACK)	*	*	*
NOW 100	100MM; FILTER; (HARD PACK)	*	*	*
CARLTON 100	100MM; FILTER; MENTHOL; (HARD PACK)	1	0.1	*
CARLTON 100	100MM; FILTER; (HARD PACK)	1	0.1	*
CAMBRIDGE	KING SIZE; FILTER	1	0.1	1
CARLTON	KING SIZE; FILTER; MENTHOL	1	0.1	1
NOW	KING SIZE; FILTER	1	0.1	1
NOW	KING SIZE; FILTER; MENTHOL	1	0.1	1
BENSON & HEDGES	REG SIZE; FILTER; (HARD PACK)	1	0.1	2
CARLTON	KING SIZE; FILTER	1	0.1	2
KOOL ULTRA **	KING SIZE; FILTER; MENTHOL	2	0.2	1
NOW 100	100MM; FILTER; MENTHOL	2	0.2	1
NOW 100	100MM; FILTER	2	0.2	2
KENT III	KING SIZE; FILTER	3	0.3	3
TRIUMPH	KING SIZE; FILTER; MENTHOL	3	0.3	3
ICEBERG 100	100MM; FILTER; MENTHOL	3	0.3	4
LUCKY 100	100MM; FILTER	3	0.3	4
MERIT ULTRA LIGHTS	KING SIZE; FILTER	4	0.3	4
MERIT ULTRA LIGHTS	KING SIZE; FILTER; MENTHOL	4	0.3	4
MERIT ULTRA LIGHTS 100	100MM; FILTER; MENTHOL	4	0.3	4
TRIUMPH	KING SIZE; FILTER	3	0.4	3
SALEM ULTRA	KING SIZE; FILTER; MENTHOL	4	0.4	4
KENT III 100	100MM; FILTER	4	0.4	5
TRIUMPH 100	100MM; FILTER	4	0.4	5
DORAL II	KING SIZE; FILTER	5	0.4	3
DORAL II	KING SIZE; FILTER; MENTHOL	5	0.4	3
KOOL ULTRA 100 **	100MM; FILTER; MENTHOL	5	0.4	4
TAREYTON LIGHTS	KING SIZE; FILTER	5	0.4	4
CAMBRIDGE 100	100MM; FILTER	5	0.4	5
CARLTON 100	100MM; FILTER; MENTHOL	5	0.4	5
CARLTON 100	100MM; FILTER	5	0.4	5
SALEM ULTRA 100	100MM; FILTER; MENTHOL	5	0.4	5
TRUE	KING SIZE; FILTER	5	0.4	5
TRUE	KING SIZE; FILTER; MENTHOL	5	0.4	5
VANTAGE ULTRA LIGHTS	KING SIZE; FILTER	5	0.4	6
VANTAGE ULTRA LIGHTS	KING SIZE; FILTER; MENTHOL	5	0.4	6
VANTAGE ULTRA LIGHTS 100	100MM; FILTER	5	0.4	6
WINSTON ULTRA	KING SIZE; FILTER	5	0.4	6
WINSTON ULTRA 100	100MM; FILTER	5	0.4	6
VANTAGE ULTRA LIGHTS 100	100MM; FILTER; MENTHOL	5	0.4	7
TRIUMPH 100	100MM; FILTER; MENTHOL	4	0.5	5

1 "Tar" - milligrams total particulate matter less nicotine and water per cigarette.

2 Nicotine total alkaloids reported in milligrams per cigarette.

3 Carbon Monoxide reported in milligrams per cigarette.

\* Indicates "tar" below 0.5 mg.; nicotine below 0.05 mg. or carbon monoxide below 0.5 mg. per cigarette.

\*\* See statement in text concerning Kool Ultra brands.

TAR NICOTINE AND CO CONTENT OF TWO HUNDRED SEVEN  
BRANDS OF DOMESTIC CIGARETTES TESTED BY FTC METHOD  
(Increasing Order of Nicotine)

BRAND NAME	TYPE	TAR 1	NICOTINE 2	CARBON MONOXIDE 3
CARLTON 120	120MM; FILTER; MENTHOL	6 0.5	4	
DECADE	KING SIZE; FILTER	6 0.5	5	
DECADE	KING SIZE; FILTER; MENTHOL	6 0.5	5	
BENSON & HEDGES ULTRA LIGHT	100MM; FILTER; MENTHOL; (HARD PACK)	6 0.5	6	
BENSON & HEDGES ULTRA LIGHT	100MM; FILTER; (HARD PACK)	6 0.5	6	
MERIT ULTRA LIGHTS 100	100MM; FILTER	6 0.5	7	
BRIGHT	KING SIZE; FILTER; MENTHOL	6 0.5	8	
CARLTON 120	120MM; FILTER	6 0.6	5	
OMNI 100	100MM; FILTER; MENTHOL	7 0.6	6	
PALL MALL EXTRA LIGHT	KING SIZE; FILTER	7 0.6	6	
TAREYTON LONG LIGHTS 100	100MM; FILTER	7 0.6	7	
MORE LIGHTS 100	100MM; FILTER; MENTHOL; (HARD PACK)	7 0.6	8	
SALEM SLIM LIGHTS 100	100MM; FILTER; MENTHOL; (HARD PACK)	7 0.6	8	
BRIGHT 100	100MM; FILTER; MENTHOL	7 0.6	10	
VIRGINIA SLIMS LIGHTS 100	100MM; FILTER; MENTHOL; (HARD PACK)	8 0.6	7	
CAMEL LIGHTS	KING SIZE; FILTER; (HARD PACK)	8 0.6	8	
MORE LIGHTS 100	100MM; FILTER; (HARD PACK)	8 0.6	8	
TRUE 100	100MM; FILTER	8 0.6	8	
VIRGINIA SLIMS LIGHTS 100	100MM; FILTER; (HARD PACK)	8 0.6	8	
SALEM LIGHTS	KING SIZE; FILTER; MENTHOL	8 0.6	9	
TRUE 100	100MM; FILTER; MENTHOL	8 0.6	9	
CAMEL LIGHTS	KING SIZE; FILTER	8 0.6	10	
PARLIAMENT LIGHTS	KING SIZE; FILTER; (HARD PACK)	9 0.6	9	
WINSTON LIGHTS	KING SIZE; FILTER	9 0.6	10	
MERIT	KING SIZE; FILTER	9 0.6	11	
MERIT	KING SIZE; FILTER; MENTHOL	9 0.6	11	
BELAIR	KING SIZE; FILTER; MENTHOL	9 0.7	9	
GOLDEN LIGHTS	KING SIZE; FILTER	9 0.7	9	
GOLDEN LIGHTS	KING SIZE; FILTER; MENTHOL	9 0.7	9	
GOLDEN LIGHTS 100	100MM; FILTER; MENTHOL	9 0.7	9	
NEWPORT LIGHTS	KING SIZE; FILTER; MENTHOL	9 0.7	9	
NEWPORT LIGHTS	KING SIZE; FIL; MENTHOL; (HARD PACK)	9 0.7	9	
RALEIGH LIGHTS	KING SIZE; FILTER	9 0.7	9	
BELAIR 100	100MM; FILTER; MENTHOL	9 0.7	10	
KOOL LIGHTS	KING SIZE; FILTER; MENTHOL	9 0.7	10	
VICEROY RICH LIGHTS	KING SIZE; FILTER	9 0.7	10	
SALEM LIGHTS 100	100MM; FILTER; MENTHOL	9 0.7	11	
VANTAGE	KING SIZE; FILTER	9 0.7	12	
VANTAGE 100	100MM; FILTER	9 0.7	12	
PARLIAMENT LIGHTS	KING SIZE; FILTER	10 0.7	9	
BENSON & HEDGES LIGHTS 100	100MM; FILTER; MENTHOL	10 0.7	11	
MARLBORO LIGHTS	KING SIZE; FILTER; (HARD PACK)	10 0.7	11	
NORTHWIND	KING SIZE; FILTER; MENTHOL	10 0.7	11	

1 "Tar" - milligrams total particulate matter less nicotine and water per cigarette.

2 Nicotine total alkaloids reported in milligrams per cigarette.

3 Carbon Monoxide reported in milligrams per cigarette.

\* Indicates "tar" below 0.5 mg.; nicotine below 0.05 mg. or carbon monoxide below 0.5 mg. per cigarette.

\*\* See statement in text concerning Koal Ultra brands.

PM3001060476

TAR NICOTINE AND CO CONTENT OF TWO HUNDRED SEVEN  
BRANDS OF DOMESTIC CIGARETTES TESTED BY FTC METHOD

(Increasing Order of Nicotine)

BRAND NAME	TYPE	TAR 1	NICOTINE 2	CARBON MONOXIDE 3
BENSON & HEDGES LIGHTS 100	100MM; FILTER	10	0.7	12
MERIT 100	100MM; FILTER; MENTHOL	10	0.7	12
VANTAGE	KING SIZE; FILTER; MENTHOL	10	0.7	13
MARLBORO LIGHTS	KING SIZE; FILTER	11	0.7	11
NORTHWIND 100	100MM; FILTER; MENTHOL	11	0.7	11
MARLBORO LIGHTS 100	100MM; FILTER	11	0.7	12
MERIT 100	100MM; FILTER	11	0.7	13
L & M LIGHTS 100	100MM; FILTER	8	0.8	5
L & M LIGHTS 100	100MM; FILTER; MENTHOL	8	0.8	6
L & M LIGHTS	KING SIZE; FILTER	9	0.8	7
PALL MALL LIGHT 100	100MM; FILTER	9	0.8	7
GOLDEN LIGHTS 100	100MM; FILTER	9	0.8	9
KOOL LIGHTS 100	100MM; FILTER; MENTHOL	10	0.8	9
NEWPORT LIGHTS 100	100MM; FILTER; MENTHOL	10	0.8	10
SATIN 100	100MM; FILTER	10	0.8	10
OLD GOLD LIGHTS	KING SIZE; FILTER	10	0.8	11
SATIN 100	100MM; FILTER; MENTHOL	10	0.8	11
RALEIGH LIGHTS 100	100MM; FILTER	10	0.8	12
VICEROY RICH LIGHTS 100	100MM; FILTER	10	0.8	12
LUCKY STRIKE	KING SIZE; FILTER	11	0.8	11
KOOL MILDS	KING SIZE; FILTER; MENTHOL	11	0.8	12
LUCKY STRIKE	KING SIZE; FILTER; (HARD PACK)	11	0.8	12
KOOL MILDS 100	100MM; FILTER; MENTHOL	11	0.8	13
MULTIFILTER	KING SIZE; FILTER	12	0.8	11
CAMEL LIGHTS 100	100MM; FILTER	12	0.8	14
WINSTON LIGHTS 100	100MM; FILTER	12	0.8	14
MULTIFILTER	KING SIZE; FILTER; MENTHOL	13	0.8	11
ALPINE	KING SIZE; FILTER; MENTHOL	14	0.8	14
PARLIAMENT LIGHTS 100	100MM; FILTER	11	0.9	10
REBEL	KING SIZE; FILTER	11	0.9	12
KENT	KING SIZE; FILTER	12	0.9	11
KENT	KING SIZE; FILTER; (HARD PACK)	12	0.9	12
LARK LIGHTS	KING SIZE; FILTER	13	0.9	12
L & M	KING SIZE; FILTER	14	0.9	13
L & M	KING SIZE; FILTER; (HARD PACK)	14	0.9	13
SARATOGA 120	120MM; FILTER; (HARD PACK)	14	0.9	14
MARLBORO	KING SIZE; FIL; MENTHOL; (HARD PACK)	15	0.9	13
MARLBORO	KING SIZE; FILTER; MENTHOL	15	0.9	14
GALAXY	KING SIZE; FILTER	15	0.9	15
VICEROY	KING SIZE; FILTER	15	0.9	17
SILVA THINS 100	100MM; FILTER	12	1.0	9
SILVA THINS 100	100MM; FILTER; MENTHOL	12	1.0	9
REBEL 100	100MM; FILTER	12	1.0	13

1 "Tar" - milligrams total particulate matter less nicotine and water per cigarette.

2 Nicotine total alkaloids reported in milligrams per cigarette.

3 Carbon Monoxide reported in milligrams per cigarette.

\* Indicates "tar" below 0.5 mg.; nicotine below 0.05 mg. or carbon monoxide below 0.5 mg. per cigarette.

\*\* See statement in text concerning Koal Ultra brands.

PM3001060477



TAR NICOTINE AND CO CONTENT OF TWO HUNDRED SEVEN  
BRANDS OF DOMESTIC CIGARETTES TESTED BY FTC METHOD  
(Increasing Order of Nicotine)

BRAND NAME	TYPE	TAR 1	NICOTINE 2	CARBON MONOXIDE 3
PALL MALL LIGHT 100	100MM; FILTER; MENTHOL	13	1.0	12
EVE LIGHTS 100	100MM; FILTER	13	1.0	13
EVE LIGHTS 100	100MM; FILTER; MENTHOL	13	1.0	13
NEWPORT RED	KING SIZE; FILTER	13	1.0	15
NEWPORT RED	KING SIZE; FILTER; (HARD PACK)	13	1.0	15
EVE LIGHTS 120	120MM; FILTER; MENTHOL; (HARD PACK)	14	1.0	11
KENT 100	100MM; FILTER	14	1.0	12
LARK	KING SIZE; FILTER	14	1.0	13
LARK LIGHTS 100	100MM; FILTER	14	1.0	14
SARATOGA 120	120MM; FILTER; MENTHOL; (HARD PACK)	14	1.0	14
L & M 100	100MM; FILTER	14	1.0	15
TAREYTON	KING SIZE; FILTER	14	1.0	15
TAREYTON 100	100MM; FILTER	14	1.0	15
VICEROY SUPER LONG 100	100MM; FILTER	14	1.0	16
SALEM 100	100MM; FILTER; MENTHOL	15	1.0	13
CAMEL	KING SIZE; FILTER	15	1.0	14
VIRGINIA SLIMS 100	100MM; FILTER	15	1.0	14
VIRGINIA SLIMS 100	100MM; FILTER; MENTHOL	15	1.0	14
CHESTERFIELD	KING SIZE; FILTER	15	1.0	15
CHESTERFIELD 100	100MM; FILTER	15	1.0	16
KOOL SUPER LONGS 100	100MM; FILTER; MENTHOL	15	1.0	16
RALEIGH	KING SIZE; FILTER	15	1.0	16
WINSTON	KING SIZE; FILTER	15	1.0	16
SALEM	KING SIZE; FILTER; MENTHOL	16	1.0	14
WINSTON INTERNATIONAL 100	100MM; FILTER; (HARD PACK)	16	1.0	14
WINSTON	KING SIZE; FILTER; (HARD PACK)	16	1.0	15
MONTCLAIR	KING SIZE; FILTER; MENTHOL	16	1.0	16
MARLBORO	KING SIZE; FILTER	17	1.0	16
PICAYUNE	REG SIZE; NON-FILTER	18	1.0	14
SPRING 100	100MM; FILTER; MENTHOL	19	1.0	16
EVE LIGHTS 120	120MM; FILTER; (HARD PACK)	14	1.1	11
BENSON & HEDGES	KING SIZE; FILTER; (HARD PACK)	15	1.1	13
ST. MORITZ 100	100MM; FILTER	15	1.1	14
ST. MORITZ 100	100MM; FILTER; MENTHOL	15	1.1	14
KOOL	KING SIZE; FIL; MENTHOL; (HARD PACK)	16	1.1	15
LARK 100	100MM; FILTER	16	1.1	15
RALEIGH 100	100MM; FILTER	16	1.1	16
WINSTON 100	100MM; FILTER	16	1.1	16
NEWPORT	KING SIZE; FIL; MENTHOL; (HARD PACK)	16	1.1	17
BENSON & HEDGES 100	100MM; FILTER; MENTHOL; (HARD PACK)	17	1.1	15
BENSON & HEDGES 100	100MM; FILTER; (HARD PACK)	17	1.1	15
KOOL	KING SIZE; FILTER; MENTHOL	17	1.1	15
MARLBORO	KING SIZE; FILTER (HARD PACK)	17	1.1	15

1 "Tar" - milligrams total particulate matter less nicotine and water per cigarette.

2 Nicotine total alkaloids reported in milligrams per cigarette.

3 Carbon Monoxide reported in milligrams per cigarette.

\* Indicates "tar" below 0.5 mg.; nicotine below 0.05 mg. or carbon monoxide below 0.5 mg. per cigarette.

\*\* See statement in text concerning Kool Ultra brands.

PM3001060478

TAR NICOTINE AND CO CONTENT OF TWO HUNDRED SEVEN  
BRANDS OF DOMESTIC CIGARETTES TESTED BY FTC METHOD  
(Increasing Order of Nicotine)

BRAND NAME	TYPE	TAR 1	NICOTINE 2	CARBON MONOXIDE 3
MARLBORO 100	100MM; FILTER	17	1.1	15
MARLBORO 100	100MM; FILTER; (HARD PACK)	17	1.1	15
BENSON & HEDGES 100	100MM; FILTER	17	1.1	16
BENSON & HEDGES 100	100MM; FILTER; MENTHOL	17	1.1	16
NEWPORT	KING SIZE; FILTER; MENTHOL	17	1.1	17
PALL MALL	KING SIZE; FILTER	17	1.1	17
MORE 120	120MM; FILTER	17	1.1	20
KENT 100	100MM; FILTER; MENTHOL	15	1.2	13
MORE 120	120MM; FILTER; MENTHOL	15	1.2	18
PALL MALL 100	100MM; FILTER	16	1.2	15
HALF & HALF	KING SIZE; FILTER	17	1.2	16
OLD GOLD FILTER	KING SIZE; FILTER	18	1.2	18
CAMEL	REG SIZE; NON-FILTER	20	1.2	12
KOOL	REG SIZE; NON-FILTER; MENTHOL	20	1.2	14
CHESTERFIELD	REG SIZE; NON-FILTER	21	1.2	12
TALL 120	120MM; FILTER; MENTHOL	17	1.3	16
LONG JOHNS 120	120MM; FILTER; MENTHOL	17	1.3	18
LONG JOHNS 120	120MM; FILTER	18	1.3	19
PHILIP MORRIS	REG SIZE; NON-FILTER	22	1.3	13
MAX 120	120MM; FILTER	18	1.4	17
MAX 120	120MM; FILTER; MENTHOL	18	1.4	17
NEWPORT 100	100MM; FILTER; MENTHOL	20	1.4	19
OLD GOLD FILTER 100	100MM; FILTER	20	1.4	19
LUCKY STRIKE	REG SIZE; NON-FILTER	24	1.4	16
PALL MALL	KING SIZE; NON-FILTER	24	1.4	16
RALEIGH	KING SIZE; NON-FILTER	24	1.4	17
TALL 120	120MM; FILTER	19	1.5	19
ENGLISH OVALS	REG SIZE; NON-FILTER; (HARD PACK)	22	1.5	12
CHESTERFIELD	KING SIZE; NON-FILTER	25	1.5	15
OLD GOLD STRAIGHT	KING SIZE; NON-FILTER	26	1.6	18
PHILIP MORRIS COMMANDER	KING SIZE; NON-FILTER	27	1.6	15
HERBERT TAREYTON	KING SIZE; NON-FILTER	26	1.7	16
BULL DURHAM	KING SIZE; FILTER	28	1.8	23
PLAYERS	REG SIZE; NON-FILTER; (HARD PACK)	27	1.9	15
ENGLISH OVALS	KING SIZE; NON-FILTER; (HARD PACK)	29	2.1	15

1 "Tar" - milligrams total particulate matter less nicotine and water per cigarette.

2 Nicotine total alkaloids reported in milligrams per cigarette.

3 Carbon Monoxide reported in milligrams per cigarette.

\* Indicates "tar" below 0.5 mg.; nicotine below 0.05 mg. or carbon monoxide below 0.5 mg. per cigarette.

\*\* See statement in text concerning Kool Ultra brands.

PM3001060479

TAR NICOTINE AND CO CONTENT OF TWO HUNDRED SEVEN  
BRANDS OF DOMESTIC CIGARETTES TESTED BY FTC METHOD

(Increasing Order of Carbon Monoxide)

BRAND NAME	TYPE	TAR 1	NICOTINE 2	CARBON MONOXIDE 3
CAMBRIDGE	KING SIZE; FILTER; (HARD PACK)	*	*	*
CARLTON	KING SIZE; FILTER; (HARD PACK)	*	*	*
CARLTON 100	100MM; FILTER; MENTHOL; (HARD PACK)	1	0.1	*
CARLTON 100	100MM; FILTER; (HARD PACK)	1	0.1	*
NOW	KING SIZE; FILTER; (HARD PACK)	*	*	*
NOW 100	100MM; FILTER; (HARD PACK)	*	*	*
CAMBRIDGE	KING SIZE; FILTER	1	0.1	1
CARLTON	KING SIZE; FILTER; MENTHOL	1	0.1	1
KOOL ULTRA **	KING SIZE; FILTER; MENTHOL	2	0.2	1
NOW	KING SIZE; FILTER	1	0.1	1
NOW	KING SIZE; FILTER; MENTHOL	1	0.1	1
NOW 100	100MM; FILTER; MENTHOL	2	0.2	1
BENSON & HEDGES	REG SIZE; FILTER; (HARD PACK)	1	0.1	2
CARLTON	KING SIZE; FILTER	1	0.1	2
NOW 100	100MM; FILTER	2	0.2	2
DORAL II	KING SIZE; FILTER	5	0.4	3
DORAL II	KING SIZE; FILTER; MENTHOL	5	0.4	3
KENT III	KING SIZE; FILTER	3	0.3	3
TRIUMPH	KING SIZE; FILTER; MENTHOL	3	0.3	3
TRIUMPH	KING SIZE; FILTER	3	0.4	3
CARLTON 120	120MM; FILTER; MENTHOL	6	0.5	4
ICEBERG 100	100MM; FILTER; MENTHOL	3	0.3	4
KOOL ULTRA 100 **	100MM; FILTER; MENTHOL	5	0.4	4
LUCKY 100	100MM; FILTER	3	0.3	4
MERIT ULTRA LIGHTS	KING SIZE; FILTER	4	0.3	4
MERIT ULTRA LIGHTS	KING SIZE; FILTER; MENTHOL	4	0.3	4
MERIT ULTRA LIGHTS 100	100MM; FILTER; MENTHOL	4	0.3	4
SALEM ULTRA	KING SIZE; FILTER; MENTHOL	4	0.4	4
TAREYTON LIGHTS	KING SIZE; FILTER	5	0.4	4
CAMBRIDGE 100	100MM; FILTER	5	0.4	5
CARLTON 100	100MM; FILTER; MENTHOL	5	0.4	5
CARLTON 100	100MM; FILTER	5	0.4	5
CARLTON 120	120MM; FILTER	6	0.6	5
DECADE	KING SIZE; FILTER	6	0.5	5
DECADE	KING SIZE; FILTER; MENTHOL	6	0.5	5
KENT III 100	100MM; FILTER	4	0.4	5
L & M LIGHTS 100	100MM; FILTER	8	0.8	5
SALEM ULTRA 100	100MM; FILTER; MENTHOL	5	0.4	5
TRIUMPH 100	100MM; FILTER	4	0.4	5
TRIUMPH 100	100MM; FILTER; MENTHOL	4	0.5	5
TRUE	KING SIZE; FILTER	5	0.4	5
TRUE	KING SIZE; FILTER; MENTHOL	5	0.4	5
BENSON & HEDGES ULTRA LIGHT	100MM; FILTER; MENTHOL; (HARD PACK)	6	0.5	6

1 "Tar" - milligrams total particulate matter less nicotine and water per cigarette.

2 Nicotine total alkaloids reported in milligrams per cigarette.

3 Carbon Monoxide reported in milligrams per cigarette.

\* Indicates "tar" below 0.5 mg.; nicotine below 0.05 mg. or carbon monoxide below 0.5 mg. per cigarette.

\*\* See statement in text concerning Kool Ultra brands.

TAR NICOTINE AND CO CONTENT OF TWO HUNDRED SEVEN  
BRANDS OF DOMESTIC CIGARETTES TESTED BY FTC METHOD

(Increasing Order of Carbon Monoxide)

BRAND NAME	TYPE	TAR 1	NICOTINE 2	CARBON MONOXIDE 3
BENSON & HEDGES ULTRA LIGHT	100MM; FILTER; (HARD PACK)	6	0.5	6
L & M LIGHTS 100	100MM; FILTER; MENTHOL	8	0.8	6
OMNI 100	100MM; FILTER; MENTHOL	7	0.6	6
PALL MALL EXTRA LIGHT	KING SIZE; FILTER	7	0.6	6
VANTAGE ULTRA LIGHTS	KING SIZE; FILTER	5	0.4	6
VANTAGE ULTRA LIGHTS	KING SIZE; FILTER; MENTHOL	5	0.4	6
VANTAGE ULTRA LIGHTS 100	100MM; FILTER	5	0.4	6
WINSTON ULTRA	KING SIZE; FILTER	5	0.4	6
WINSTON ULTRA 100	100MM; FILTER	5	0.4	6
L & M LIGHTS	KING SIZE; FILTER	9	0.8	7
MERIT ULTRA LIGHTS 100	100MM; FILTER	6	0.5	7
PALL MALL LIGHT 100	100MM; FILTER	9	0.8	7
TAREYTON LONG LIGHTS 100	100MM; FILTER	7	0.6	7
VANTAGE ULTRA LIGHTS 100	100MM; FILTER; MENTHOL	5	0.4	7
VIRGINIA SLIMS LIGHTS 100	100MM; FILTER; MENTHOL; (HARD PACK)	8	0.6	7
BRIGHT	KING SIZE; FILTER; MENTHOL	6	0.5	8
CAMEL LIGHTS	KING SIZE; FILTER; (HARD PACK)	8	0.6	8
MORE LIGHTS 100	100MM; FILTER; MENTHOL; (HARD PACK)	7	0.6	8
MORE LIGHTS 100	100MM; FILTER; (HARD PACK)	8	0.6	8
SALEM SLIM LIGHTS 100	100MM; FILTER; MENTHOL; (HARD PACK)	7	0.6	8
TRUE 100	100MM; FILTER	8	0.6	8
VIRGINIA SLIMS LIGHTS 100	100MM; FILTER; (HARD PACK)	8	0.6	8
BELAIR	KING SIZE; FILTER; MENTHOL	9	0.7	9
GOLDEN LIGHTS	KING SIZE; FILTER	9	0.7	9
GOLDEN LIGHTS	KING SIZE; FILTER; MENTHOL	9	0.7	9
GOLDEN LIGHTS 100	100MM; FILTER; MENTHOL	9	0.7	9
GOLDEN LIGHTS 100	100MM; FILTER	9	0.8	9
KOOL LIGHTS 100	100MM; FILTER; MENTHOL	10	0.8	9
NEWPORT LIGHTS	KING SIZE; FILTER; MENTHOL	9	0.7	9
NEWPORT LIGHTS	KING SIZE; FIL; MENTHOL; (HARD PACK)	9	0.7	9
PARLIAMENT LIGHTS	KING SIZE; FILTER; (HARD PACK)	9	0.6	9
PARLIAMENT LIGHTS	KING SIZE; FILTER	10	0.7	9
RALEIGH LIGHTS	KING SIZE; FILTER	9	0.7	9
SALEM LIGHTS	KING SIZE; FILTER; MENTHOL	8	0.6	9
SILVA THINS 100	100MM; FILTER	12	1.0	9
SILVA THINS 100	100MM; FILTER; MENTHOL	12	1.0	9
TRUE 100	100MM; FILTER; MENTHOL	8	0.6	9
BELAIR 100	100MM; FILTER; MENTHOL	9	0.7	10
BRIGHT 100	100MM; FILTER; MENTHOL	7	0.6	10
CAMEL LIGHTS	KING SIZE; FILTER	8	0.6	10
KOOL LIGHTS	KING SIZE; FILTER; MENTHOL	9	0.7	10
NEWPORT LIGHTS 100	100MM; FILTER; MENTHOL	10	0.8	10
PARLIAMENT LIGHTS 100	100MM; FILTER	11	0.9	10

1 "Tar" - milligrams total particulate matter less nicotine and water per cigarette.

2 Nicotine total alkaloids reported in milligrams per cigarette.

3 Carbon Monoxide reported in milligrams per cigarette.

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\*\* See statement in text concerning Koool Ultra brands.

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TAR NICOTINE AND CO CONTENT OF TWO HUNDRED SEVEN  
BRANDS OF DOMESTIC CIGARETTES TESTED BY FTC METHOD  
(Increasing Order of Carbon Monoxide)

BRAND NAME	TYPE	TAR 1	NICOTINE 2	CARBON MONOXIDE 3
SATIN 100	100MM; FILTER	10	0.8	10
VICEROY RICH LIGHTS	KING SIZE; FILTER	9	0.7	10
WINSTON LIGHTS	KING SIZE; FILTER	9	0.6	10
BENSON & HEDGES LIGHTS 100	100MM; FILTER; MENTHOL	10	0.7	11
EVE LIGHTS 120	120MM; FILTER; MENTHOL; (HARD PACK)	14	1.0	11
EVE LIGHTS 120	120MM; FILTER; (HARD PACK)	14	1.1	11
KENT	KING SIZE; FILTER	12	0.9	11
LUCKY STRIKE	KING SIZE; FILTER	11	0.8	11
MARLBORO LIGHTS	KING SIZE; FILTER; (HARD PACK)	10	0.7	11
MARLBORO LIGHTS	KING SIZE; FILTER	11	0.7	11
MERIT	KING SIZE; FILTER	9	0.6	11
MERIT	KING SIZE; FILTER; MENTHOL	9	0.6	11
MULTIFILTER	KING SIZE; FILTER	12	0.8	11
MULTIFILTER	KING SIZE; FILTER; MENTHOL	13	0.8	11
NORTHWIND	KING SIZE; FILTER; MENTHOL	10	0.7	11
NORTHWIND 100	100MM; FILTER; MENTHOL	11	0.7	11
OLD GOLD LIGHTS	KING SIZE; FILTER	10	0.8	11
SALEM LIGHTS 100	100MM; FILTER; MENTHOL	9	0.7	11
SATIN 100	100MM; FILTER; MENTHOL	10	0.8	11
BENSON & HEDGES LIGHTS 100	100MM; FILTER	10	0.7	12
CAMEL	REG SIZE; NON-FILTER	20	1.2	12
CHESTERFIELD	REG SIZE; NON-FILTER	21	1.2	12
ENGLISH OVALS	REG SIZE; NON-FILTER; (HARD PACK)	22	1.5	12
KENT	KING SIZE; FILTER; (HARD PACK)	12	0.9	12
KENT 100	100MM; FILTER	14	1.0	12
KOOL MILDS	KING SIZE; FILTER; MENTHOL	11	0.8	12
LARK LIGHTS	KING SIZE; FILTER	13	0.9	12
LUCKY STRIKE	KING SIZE; FILTER; (HARD PACK)	11	0.8	12
MARLBORO LIGHTS 100	100MM; FILTER	11	0.7	12
MERIT 100	100MM; FILTER; MENTHOL	10	0.7	12
PALL MALL LIGHT 100	100MM; FILTER; MENTHOL	13	1.0	12
RALEIGH LIGHTS 100	100MM; FILTER	10	0.8	12
REBEL	KING SIZE; FILTER	11	0.9	12
VANTAGE	KING SIZE; FILTER	9	0.7	12
VANTAGE 100	100MM; FILTER	9	0.7	12
VICEROY RICH LIGHTS 100	100MM; FILTER	10	0.8	12
BENSON & HEDGES	KING SIZE; FILTER; (HARD PACK)	15	1.1	13
EVE LIGHTS 100	100MM; FILTER	13	1.0	13
EVE LIGHTS 100	100MM; FILTER; MENTHOL	13	1.0	13
KENT 100	100MM; FILTER; MENTHOL	15	1.2	13
KOOL MILDS 100	100MM; FILTER; MENTHOL	11	0.8	13
L & M	KING SIZE; FILTER	14	0.9	13
L & M	KING SIZE; FILTER; (HARD PACK)	14	0.9	13

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2 Nicotine total alkaloids reported in milligrams per cigarette.

3 Carbon Monoxide reported in milligrams per cigarette.

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TAR NICOTINE AND CO CONTENT OF TWO HUNDRED SEVEN  
BRANDS OF DOMESTIC CIGARETTES TESTED BY FTC METHOD  
(Increasing Order of Carbon Monoxide)

BRAND NAME	TYPE	TAR 1	NICOTINE 2	CARBON MONOXIDE 3
LARK	KING SIZE; FILTER	14	1.0	13
MARLBORO	KING SIZE; FIL; MENTHOL; (HARD PACK)	15	0.9	13
MERIT 100	100MM; FILTER	11	0.7	13
PHILIP MORRIS	REG SIZE; NON-FILTER	22	1.3	13
REBEL 100	100MM; FILTER	12	1.0	13
SALEM 100	100MM; FILTER; MENTHOL	15	1.0	13
VANTAGE	KING SIZE; FILTER; MENTHOL	10	0.7	13
ALPINE	KING SIZE; FILTER; MENTHOL	14	0.8	14
CAMEL	KING SIZE; FILTER	15	1.0	14
CAMEL LIGHTS 100	100MM; FILTER	12	0.8	14
KOOL	REG SIZE; NON-FILTER; MENTHOL	20	1.2	14
LARK LIGHTS 100	100MM; FILTER	14	1.0	14
MARLBORO	KING SIZE; FILTER; MENTHOL	15	0.9	14
PICAYUNE	REG SIZE; NON-FILTER	18	1.0	14
SALEM	KING SIZE; FILTER; MENTHOL	16	1.0	14
SARATOGA 120	120MM; FILTER; (HARD PACK)	14	0.9	14
SARATOGA 120	120MM; FILTER; MENTHOL; (HARD PACK)	14	1.0	14
ST. MORITZ 100	100MM; FILTER	15	1.1	14
ST. MORITZ 100	100MM; FILTER; MENTHOL	15	1.1	14
VIRGINIA SLIMS 100	100MM; FILTER	15	1.0	14
VIRGINIA SLIMS 100	100MM; FILTER; MENTHOL	15	1.0	14
WINSTON INTERNATIONAL 100	100MM; FILTER; (HARD PACK)	16	1.0	14
WINSTON LIGHTS 100	100MM; FILTER	12	0.8	14
BENSON & HEDGES 100	100MM; FILTER; MENTHOL; (HARD PACK)	17	1.1	15
BENSON & HEDGES 100	100MM; FILTER; (HARD PACK)	17	1.1	15
CHESTERFIELD	KING SIZE; FILTER	15	1.0	15
CHESTERFIELD	KING SIZE; NON-FILTER	25	1.5	15
ENGLISH OVALS	KING SIZE; NON-FILTER; (HARD PACK)	29	2.1	15
GALAXY	KING SIZE; FILTER	15	0.9	15
KOOL	KING SIZE; FIL; MENTHOL; (HARD PACK)	16	1.1	15
KOOL	KING SIZE; FILTER; MENTHOL	17	1.1	15
L & M 100	100MM; FILTER	14	1.0	15
LARK 100	100MM; FILTER	16	1.1	15
MARLBORO	KING SIZE; FILTER (HARD PACK)	17	1.1	15
MARLBORO 100	100MM; FILTER	17	1.1	15
MARLBORO 100	100MM; FILTER; (HARD PACK)	17	1.1	15
NEWPORT RED	KING SIZE; FILTER	13	1.0	15
NEWPORT RED	KING SIZE; FILTER; (HARD PACK)	13	1.0	15
PALL MALL 100	100MM; FILTER	16	1.2	15
PHILIP MORRIS COMMANDER	KING SIZE; NON-FILTER	27	1.6	15
PLAYERS	REG SIZE; NON-FILTER; (HARD PACK)	27	1.9	15
TAREYTON	KING SIZE; FILTER	14	1.0	15
TAREYTON 100	100MM; FILTER	14	1.0	15

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TAR NICOTINE AND CO CONTENT OF TWO HUNDRED SEVEN  
BRANDS OF DOMESTIC CIGARETTES TESTED BY FTC METHOD  
(Increasing Order of Carbon Monoxide)

BRAND NAME	TYPE	TAR 1	NICOTINE 2	CARBON MONOXIDE 3
WINSTON	KING SIZE; FILTER; (HARD PACK)	16	1.0	15
BENSON & HEDGES 100	100MM; FILTER	17	1.1	16
BENSON & HEDGES 100	100MM; FILTER; MENTHOL	17	1.1	16
CHESTERFIELD 100	100MM; FILTER	15	1.0	16
HALF & HALF	KING SIZE; FILTER	17	1.2	16
HERBERT TAREYTON	KING SIZE; NON-FILTER	26	1.7	16
KOOL SUPER LONGS 100	100MM; FILTER; MENTHOL	15	1.0	16
LUCKY STRIKE	REG SIZE; NON-FILTER	24	1.4	16
MARLBORO	KING SIZE; FILTER	17	1.0	16
MONTCLAIR	KING SIZE; FILTER; MENTHOL	16	1.0	16
PALL MALL	KING SIZE; NON-FILTER	24	1.4	16
RALEIGH	KING SIZE; FILTER	15	1.0	16
RALEIGH 100	100MM; FILTER	16	1.1	16
SPRING 100	100MM; FILTER; MENTHOL	19	1.0	16
TALL 120	120MM; FILTER; MENTHOL	17	1.3	16
VICEROY SUPER LONG 100	100MM; FILTER	14	1.0	16
WINSTON	KING SIZE; FILTER	15	1.0	16
WINSTON 100	100MM; FILTER	16	1.1	16
MAX 120	120MM; FILTER	18	1.4	17
MAX 120	120MM; FILTER; MENTHOL	18	1.4	17
NEWPORT	KING SIZE; FIL; MENTHOL; (HARD PACK)	16	1.1	17
NEWPORT	KING SIZE; FILTER; MENTHOL	17	1.1	17
PALL MALL	KING SIZE; FILTER	17	1.1	17
RALEIGH	KING SIZE; NON-FILTER	24	1.4	17
VICEROY	KING SIZE; FILTER	15	0.9	17
LONG JOHNS 120	120MM; FILTER; MENTHOL	17	1.3	18
MORE 120	120MM; FILTER; MENTHOL	15	1.2	18
OLD GOLD FILTER	KING SIZE; FILTER	18	1.2	18
OLD GOLD STRAIGHT	KING SIZE; NON-FILTER	26	1.6	18
LONG JOHNS 120	120MM; FILTER	18	1.3	19
NEWPORT 100	100MM; FILTER; MENTHOL	20	1.4	19
OLD GOLD FILTER 100	100MM; FILTER	20	1.4	19
TALL 120	120MM; FILTER	19	1.5	19
MORE 120	120MM; FILTER	17	1.1	20
BULL DURHAM	KING SIZE; FILTER	28	1.8	23

1 "Tar" - milligrams total particulate matter less nicotine and water per cigarette.

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